Docket No.: 3895-0102P

(PATENT)

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

John HIND et al.

Before the Board of Appeals

Appeal No.:

Application No.: 10/051,951

Confirmation No.: 1746

Filed: January 17, 2002

Art Unit: 2164

For: SYSTEM AND METHOD FOR MANAGING

AND SECURING META DATA USING

CENTRAL REPOSITORY

Examiner: J. F. Betit

**APPEAL BRIEF** 

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#### MS APPEAL BRIEF - PATENTS

Docket No.: 3895-0102P (PATENT)

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Examiner: J. F. Betit

## APPEAL BRIEF IN RESPONSE TO NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF

#### MS APPEAL BRIEF - PATENTS

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

This is an Appeal from the Office Action of December 27, 2007, rejecting claims 3-23, 25-50, 52-78, 80-84 and 88-99 in the above-identified application. The appealed claims are claims 3-23, 25-50, 52-78, 80-84 and 88-99, and are set forth in the attached Appendix.

Brief On Behalf of Appellants

I. REAL PARTY IN INTEREST

The instant application is assigned to International Business Machine Corporation as

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recorded on January 17, 2002, at Reel/Frame 012526/0800. No further assignments of this

application have been made.

### II. RELATED APPEALS AND INTERFERENCES

Atty. Docket No: 3895-0102P

There are no related appeals or interferences for the instant application.

#### III. STATUS OF THE CLAIMS

Claims 3-23, 25-50, 52-78, 80-84 and 88-99 were rejected in the Office Action of December 27, 2007.

#### IV. STATUS OF AMENDMENTS

An Amendment has been filed on November 9, 2004 to amend claims 1, 4-14, 16-20, 28-41, 44-47, 49, 52, 53, 55, 58-61, 65, 66, 68, 69, 71, 74, 75 and 80, cancel 24, 51 and 79, and add claims 85-90, to respond to the Office Action of August 10, 2004.

An Amendment has been filed on July 21, 2005 to amend claims 1, 7, 10, 13, 28, 37, 40, 55, 65, 68 and 89, and cancel 85-87, to respond to the Office Action of April 21, 2005.

An Amendment has been filed on January 5, 2006 to amend claims 1, 28 and 55, and add 91-93, to respond to the Office Action of September 5, 2005.

An Amendment has been filed on June 14, 2006 to amend claims 3, 4, 7, 10, 20, 22, 26, 27, 30, 31, 34, 37, 47, 49, 53, 54, 56, 57, 59, 62, 65, 75, 77, 81-84 and 91-93, and cancel 1, 2, 28, 29, 55 and 58. In particular, this Amendment was made to change the dependency of dependent claims from cancelled independent claims 1, 28 and 90 to the allowed independent claims 88-90, to respond to the Office Action of March 7, 2006.

An Amendment has been filed on October 1, 2007 to amend existing claims and add new claims. In particular, new independent claims 94, 96 and 98 are exactly identical to previously-cancelled independent claims 1, 28 and 55, respectively, as presented in the Amendment of January 5, 2006. New dependent claims 95, 97 and 99 are exactly identical to previously-cancelled dependent claims 2, 29 and 58, respectively, as presented in the Amendment of January 5, 2006.

In addition, independent claims 88-90 have been amended to depend from claims 95, 97 and 99, respectively.

Furthermore, some dependent claims (dependent from previously-cancelled independent claims 1, 28 and 55 and dependent claims 2, 29 and 58) have been respectively redirected to new independent claims 94, 96 and 98 and new dependent claims 95, 97 and 99 accordingly.

Claims 94, 3-23, 25-27, 88, 91 and 95

Independent claim 94 and its dependent claims relate to a method of managing meta data (as

discussed, e.g., in FIGs. 3A and 3B and on page 1, lines 21-25 of the specification) using a central

repository (e.g., 66 in FIG. 1) at a central repository subsystem (e.g., 60 in FIG. 1), the central

repository being accessible by a computing device (e.g., 10A-C in FIGs. 1 and 2) through a

communications network (e.g., 52 in FIG. 1), as discussed, e.g., in FIG. 1 and on page 10, lines 22-

27 and page 11, lines 1-6 of the specification, the method comprising the steps of:

connecting to the central repository through the communications network based on a user

input (e.g., 41 and 42 in FIG. 3A), as discussed, e.g., in FIGs. 1, 3A and 4 (S10) and on page 30,

lines 14-24 of the specification;

updating a local repository (e.g., 15 in FIG. 2) of the computing device with at least one

segment from the central repository that is associated with the user to produce a meta data collection

(e.g., 44-47 in FIG. 3B) associated with the user, as discussed, e.g., in FIGs. 1, 2, 3B, 4 (S20) and 5,

and on page 30, lines 25-26, page 31, lines 1-4, page 32, lines 15-26, page 33, lines 1-26 and page

34, lines 1-2 of the specification; and

utilizing, by the computing device, the meta data collection during a current user session at

the computing device to assist the user in using the computing device, as discussed, e.g., in FIGs. 1,

2, 4 (S40) and 6, and on page 31, lines 5-9, page 34, lines 3-26 and page 35, line 1-2 of the

specification,

wherein the utilizing step comprises retrieving, from the meta data collection, meta data that

would be most appropriate for each of different contexts of using the computing device, based on at

least a current role of the user, as discussed, e.g., in FIGs. 6 (S45-S47) and on page 34, lines 3-26 and page 35, line 1-2 of the specification.

#### Claims 96, 30-50, 52, 53, 54, 89, 92 and 97

Independent claim 96 and its dependent claims relate to a computer program product embodied on computer readable medium readable by at least one of a computing device (e.g., 10A-C in FIGs. 1 and 2) and a central repository subsystem (e.g., 60 in FIG. 1), for managing meta data (as discussed, e.g., in FIGs. 3A and 3B and on page 1, lines 21-25 of the specification) using a central repository (e.g., 66 in FIG. 1) at the central repository subsystem, the central repository being accessible by the computing device through a communication network (e.g., 52 in FIG. 1), as discussed, e.g., in FIG. 1 and on page 10, lines 22-27 and page 11, lines 1-6 of the specification, the computer program product comprising:

computer executable code configured to connect, through the communications network, to the central repository based on a user input (e.g., 41 and 42 in FIG. 3A), as discussed, e.g., in FIGs. 1, 3A and 4 (S10) and on page 30, lines 14-24 of the specification;

computer executable code configured to update a local repository (e.g., 15 in FIG. 2) of the computing device with at least one segment from the central repository that is associated with the user to produce a meta data collection (e.g., 44-47 in FIG. 3B) associated with the user, as discussed, e.g., in FIGs. 1, 2, 3B, 4 (S20) and 5, and on page 30, lines 25-26, page 31, lines 1-4, page 32, lines 15-26, page 33, lines 1-26 and page 34, lines 1-2 of the specification; and

computer executable code configured to utilize, by the computing device, the meta data collection during a current user session at the computing device to assist the user in using the

computing device; as discussed, e.g., in FIGs. 1, 2, 4 (S40) and 6, and on page 31, lines 5-9, page 34, lines 3-26 and page 35, line 1-2 of the specification,

wherein the computer executable code configured to utilize comprises computer executable code configured to retrieve, from the meta data collection, meta data that would be most appropriate for each of different contexts of using the computing device, based on at least a current role of the user, as discussed, e.g., in FIGs. 6 (S45-S47) and on page 34, lines 3-26 and page 35, line 1-2 of the specification.

#### Claims 98, 56, 57, 59-78, 80-84, 90, 93 and 99

Independent claim 98 and its dependent claims relate to a system (e.g., 100 in FIG. 1) for managing meta data (as discussed, e.g., in FIGs. 3A and 3B and on page 1, lines 21-25 of the specification) in a secure manner, the system comprising:

a central repository subsystem (e.g., 60 in FIG. 1) comprising a central repository (e.g., 66 in FIG. 1) for storing a plurality of segments associated with a user in a collection order, as discussed, e.g., in FIG.1 and on page 11, lines 7-12 of the specification.; and

at least one computing device (e.g., 10A-C in FIGs. 1 and 2) capable of communicating with the central repository subsystem through a communications network(e.g., 52 in FIG. 1), as discussed, e.g., in FIG. 1 and on page 10, lines 22-27 and page 11, lines 1-6 of the specification, the computing device comprising a local repository (e.g., 15 in FIG. 2) and being capable of connecting, through the communications network, to the central repository based on a user input (e.g., 41 and 42 in FIG. 3A), as discussed, e.g., in FIGs. 1, 3A and 4 (S10) and on page 30, lines 14-24 of the specification; updating the local repository with at least one of the segments from the central repository to produce a meta data collection (e.g., 44-47 in FIG. 3B) associated with the user, as

discussed, e.g., in FIGs. 1, 2, 3B, 4 (S20) and 5, and on page 30, lines 25-26, page 31, lines 1-4, page 32, lines 15-26, page 33, lines 1-26 and page 34, lines 1-2 of the specification; and utilizing the meta data collection during a current user session at the computing device to assist the user in using the computing device, as discussed, e.g., in FIGs. 1, 2, 4 (S40) and 6, and on page 31, lines 5-9, page 34, lines 3-26 and page 35, line 1-2 of the specification,

wherein the computing device retrieves, from the meta data collection, meta data that would be most appropriate for each of different contexts of using the computing device, based on at least a current role of the user, as discussed, e.g., in FIGs. 6 (S45-S47) and on page 34, lines 3-26 and page 35, line 1-2 of the specification.

#### VI. GROUNDS OF REJECTION

Claims 3, 4, 10, 11, 17, 20-22, 30, 31, 37, 38, 44, 47-49, 56, 57, 59, 65, 66, 72, 75-77, 83, 88-99 [sic., 91-99] are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dedrick, (U.S. Patent No. 5,710,884; hereinafter as "Dedrick") in view of Arlein et al. (U.S. Patent Application Publication No. US 2002/0133500; hereinafter as "Arlein").

Claims 5, 6, 25, 32, 33, 52, 60, 61 and 80 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dedrick in view of Arlein, and further in view of Nguyen (U.S. Patent No. 5,638,448).

Claims 7-9, 34-36 and 62-64 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dedrick in view of Arlein, and further in view of Kim (U.S. Patent No. 6,546,002 E1).

Claims 12-16, 39-43 and 67-71 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dedrick in view of Arlein, and further in view of Bull et al. (U.S. Patent No. 5,901,287).

Claims 18, 45 and 73 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dedrick in view of Arlein, and further in view of Mohan et al. (U.S. Patent No. 6,505,230) B1).

Claims 19, 46 and 74 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dedrick in view of Arlein, and further in view of Chun et al. (U.S. Patent No. 2002/0184527 A1).

Claims 23, 50 and 78 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dedrick in view of Arlein, and further in view of Nagahara et al. (U.S. Patent No. 6,636,246 B1).

Claims 26, 53, 81 and 99 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dedrick in view of Arlein, and further in view of the article entitled "Net Security Standard from the Open Group Brings the Realization of High-Value E-Commerce for Everyone a Step Further" (hereinafter as "Net Security Standard article").

Brief On Behalf of Appellants

Claims 27, 54 and 82 are rejected under 35 U.S.C. § 103(a) as being unpatentable over

Dedrick in view of Arlein, and further in view of Charisius et al. (U.S. Patent Publication No.

2002/0077842 A1).

Claim 84 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Dedrick in view of

Arlein and the Net Security Standard article, and further in view of Lim et al. (U.S. Patent 6,728,843

B1).

Claims 88-90 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dedrick in

view of Mosher et al. (U.S. Patent Application Publication No. US 2003/0050930).

#### VII. APPELLANT' ARGUMENTS

#### 1. Rejection under 35 U.S.C. § 103(a) over Dedrick, in view of Arlein

#### Independent Claims 94, 96 and 98

Independent claim 94 recites a combination of steps including "updating a local repository of the computing device with at least one segment from the central repository that is associated with the user to produce a meta data collection associated with the user", "utilizing, by the computing device, the meta data collection during a current user session at the computing device to assist the user in using the computing device" and "the utilizing step comprises retrieving, from the meta data collection, meta data that would be most appropriate for each of different contexts of using the computing device, based on at least a current role of the user".

Independent claim 96 recites a combination of elements including "computer executable code configured to update a local repository of the computing device with at least one segment from the central repository that is associated with the user to produce a meta data collection associated with the user", "computer executable code configured to utilize, by the computing device, the meta data collection during a current user session at the computing device to assist the user in using the computing device" and "the computer executable code configured to utilize comprises computer executable code configured to retrieve, from the meta data collection, meta data that would be most appropriate for each of different contexts of using the computing device, based on at least a current role of the user".

Independent claim 98 recites a combination of elements including "at least one computing device capable of communicating with the central repository subsystem through a communications network, the computing device comprising a local repository and being capable of connecting, through the communications network, to the central repository based on a user input, updating the local

repository with at least one of the segments from the central repository to produce a meta data collection associated with the user, and utilizing the meta data collection during a current user session at the computing device to assist the user in using the computing device" and "the computing device retrieves, from the meta data collection, meta data that would be most appropriate for each of different contexts of using the computing device, based on at least a current role of the user".

Appellants respectfully submit that the above combinations of elements and steps set forth in claims 94, 96 and 98 are not disclosed or suggested by the references relied on by the Examiner.

The Examiner in the Office Action of March 7, 2006 has correctly acknowledged that Dedrick fails to teach retrieving, from the meta data collection (located at the local repository), meta data that would be most appropriate for each of different contexts of using the computing device, based on at least a current role of the user as recited in claims 1, 28 and 55 (now claims 94, 96 and 98).

Although Arlein discloses the user has the ability to have multiple personae stored in a profile database, Arlein also discloses that it allows the merchant server to read a persona profile of a user from the persona database 208 remote from the user and the merchant (see FIGs. 2 and 4; paragraphs 0075-0079). In other words, the persona profile is obtained by the merchant server at the merchant's site. However, the computer device of the user does not obtain the persona profile itself because it is the merchant server, not the computer device of the user, that uses the persona profile of the user. Therefore, the persona profile in Arlein cannot be used to "assist the user in using the computing device" as recited in claims 94, 96 and 98, and the "meta data" that "would be most appropriate for each of different contexts of using the computing device" as recited in claims 94, 96 and 98 cannot be retrieved from the meta data collection (seemed to be referred to by the

Examiner as the personal profile) by the computer device of the user, because the persona profile of the user is not at the user's computer device, but at the merchant's site.

The Examiner on page 29, lines 15-17 of the Office Action of March 7, 2006 alleged "it is a reasonable expectation that the "multiple personae" found in Arlein could be adapted to exist locally on the client instead of on a remote server since both have storage space." Appellants respectfully disagree. In particular, one of the major concerns of Arlein is the privacy-preserving global customization to eliminate the privacy risks due to the non-anonymously stored behavioral profiles (see e.g., paragraph 0006). The reason for having the persona database 208 remote from the user's computer or even the persona server is to provide and protect the privacy of the user, i.e., to eliminate any single point at which different personae profiles can be tied to the same user (see Abstract and paragraph 0114). If the "multiple personae" did exist locally on the user instead of on a remote database as the Examiner suggested, the user would be exposed to the privacy risk again because different personae profiles of the same user are inevitably tied to the same user due to the locally resided "multiple personae". Accordingly, Arlein actually teaches away from locating the "multiple personae" locally on the user's computer device. Therefore, the Office Action has not established a prima facie case of obviousness and one skilled in the art would not have the proper motivation to combine Dedrick and Arlein.

With regard to the Examiner's reliance on the other secondary references (see below), these references have only been relied on for their alleged teachings of the features recited in the dependent claims. These references also fail to disclose the above combinations of steps and elements as set forth in independent claims 94, 96 and 98. Accordingly, these references fail to cure the deficiencies of Dedrick or Arlein, and thus the rejections are improper.

Accordingly, none of the references utilized by the Examiner individually or in combination teach or suggest the above-noted features of independent claims 94, 96 and 98 and their dependent claims (at least due to their dependency). Therefore, Appellants respectfully submit that all of the claims clearly define over the combination of the utilized references.

Claims 3, 4, 10, 11, 17, 20-22, 30, 31, 37, 38, 44, 47-49, 56, 57, 59, 65, 66, 72, 75-77, 83, 91-93, 95, 97 and 99

Appellants respectfully submit that dependent claims 3, 4, 10, 11, 17, 20-22, 30, 31, 37, 38, 44, 47-49, 56, 57, 59, 65, 66, 72, 75-77, 83, 91-93, 95, 97 and 99 are allowable due to their dependency from their independent claims 94, 96 and 98, as well as due to the additional recitation included in these claims.

# 2. Rejection under 35 U.S.C. § 103(a) over Dedrick in view of Arlein, and further in view of Nguyen

#### Claims 5, 6, 25, 32, 33, 52, 60, 61 and 80

Appellants respectfully submit that dependent claims 5, 6, 25, 32, 33, 52, 60, 61 and 80 are allowable due to their dependency from their independent claims 94, 96 and 98, as well as due to the additional recitation included in these claims.

3. Rejection under 35 U.S.C. § 103(a) over Dedrick in view of Arlein, and further in view of

<u>Kim</u>

Claims 7-9, 34-36 and 62-64

Appellants respectfully submit that dependent claims 7-9, 34-36 and 62-64 are allowable due

to their dependency from their independent claims 94, 96 and 98, as well as due to the additional

recitation included in these claims.

4. Rejection under 35 U.S.C. § 103(a) over Dedrick in view of Arlein, and further in view of

Bull et al.

Claims 12-16, 39-43 and 67-71

Appellants respectfully submit that dependent claims 12-16, 39-43 and 67-71 are allowable

due to their dependency from their independent claims 94, 96 and 98, as well as due to the additional

recitation included in these claims.

5. Rejection under 35 U.S.C. § 103(a) over Dedrick in view of Arlein, and further in view of

Mohan et al.

Claims 18, 45 and 73

Appellants respectfully submit that dependent claims 18, 45 and 73 are allowable due to their

dependency from their independent claims 94, 96 and 98, as well as due to the additional recitation

included in these claims.

6. Rejection under 35 U.S.C. § 103(a) over Dedrick in view of Arlein, and further in view of

Chun et al.

Claims 19, 46 and 74

Appellants respectfully submit that dependent claims 19, 46 and 74 are allowable due to their

dependency from their independent claims 94, 96 and 98, as well as due to the additional recitation

included in these claims.

7. Rejection under 35 U.S.C. § 103(a) over Dedrick in view of Arlein, and further in view of

Nagahara et al.

Claims 23, 50 and 78

Appellants respectfully submit that dependent claims 23, 50 and 78 are allowable due to their

dependency from their independent claims 94, 96 and 98, as well as due to the additional recitation

included in these claims.

8. Rejection under 35 U.S.C. § 103(a) over Dedrick in view of Arlein, and further in view of

Net Security Standard article

Claims 26, 53, 81 and 99

Appellants respectfully submit that dependent claims 26, 53, 81 and 99 are allowable due to

their dependency from their independent claims 94, 96 and 98, as well as due to the additional

recitation included in these claims.

9. Rejection under 35 U.S.C. § 103(a) over Dedrick in view of Arlein, and further in view of

Charisius et al.

Claims 27, 54 and 82

Appellants respectfully submit that dependent claims 27, 54 and 82 are allowable due to their

dependency from their independent claims 94, 96 and 98, as well as due to the additional recitation

included in these claims.

10. Rejection under 35 U.S.C. § 103(a) over Dedrick in view of Arlein and the Net Security

Standard article, and further in view of Lim et al.

Claim 84

Appellants respectfully submit that dependent claim 84 is allowable due to its dependency

from its independent claim 98, as well as due to the additional recitation included in these claims.

11. Rejection under 35 U.S.C. § 103(a) over Dedrick in view of Mosher et al.

**Independent Claims 88-90** 

Appellants respectfully submit that independent claims 88-90 are allowable for the same

reasons as independent claims 94, 96 and 98, as well as due to the additional recitation included in

these claims.

In summary, it is believed that independent claims 94, 96 and 98, as well as their dependent

claims are neither taught nor suggested by the combination of the references utilized by the

Examiner. It is believed that the Appellants have countered all the reasons given for the rejections of

the appealed claims, and thus these rejections do not appear to be proper and should be withdrawn.

Accordingly, it is respectfully requested that this Board reverse the rejections of claims 3-23, 25-50, 52-78, 80-84 and 88-99.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 09/0461 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Dated: January 31, 2008

Respectfully submitted,

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Attachments: Claims Appendix

Evidence Appendix

Related Proceedings Appendix

IN

#### VIII. CLAIMS APPENDIX

#### 1-2. (Cancelled)

- (Previously Presented) The method of claim 94, further comprising the step of:
  incrementally uploading any new meta data generated during the current user session
  from the computing device to the central repository.
- 4. (Previously Presented) The method of claim 94, wherein the connecting step comprises:

receiving, by the central repository subsystem, authentication information from the user; verifying validity of the authentication information; and

notifying the computing device that the user has proper authority to access the central repository if the authentication information is verified as valid.

- 5. (Previously Presented) The method of claim 4, wherein the authentication information comprises user identification, a pass phrase of the user, and an identifier for the central repository or a component at the central repository subsystem.
  - 6. (Previously Presented) The method of claim 5, wherein the verifying step comprises: determining a secret key represented as a hash of:

the received user identification, concatenated with a hash of the received identifier, concatenated with the received pass phrase; and

comparing the secret key with a stored key associated with the user.

7. (Previously Presented) The method of claim 94, wherein the updating step comprises: determining if the local repository is at a null state;

first requesting the central repository subsystem to transmit any segment associated with the user that has not been applied to the computing device if the determining step indicates that the local repository is not at a null state; and

second requesting the central repository subsystem to transmit all segments associated with the user if the determining step indicates that the local repository is at a null state.

8. (Previously Presented) The method of claim 7, wherein the updating step further comprises:

receiving at least one segment from the central repository subsystem in response to said first requesting step;

decrypting the at least one segment; and

applying the decrypted at least one segment to the meta data collection to produce the meta data collection associated with the user.

Application No. 10/051,951 Atty. Docket No: 3895-0102P
Appeal Brief dated January 31, 2008

Brief On Behalf of Appellants

9. (Previously Presented) The method of claim 7, wherein the updating step further

comprises:

receiving at least one segment from the central repository subsystem in response to said

second requesting step;

decrypting the at least one segment; and

generating the meta data collection for the user using the decrypted at least one segment.

10. (Previously Presented) The method of claim 94, wherein the retrieving step is

performed using heuristics algorithms and the utilizing step further comprises applying the

retrieved meta data in each of the different contexts.

11. (Previously Presented) The method of claim 10, wherein the current context

comprises at least one of the following: opening a web page, filling in a computer form, filling in

a password-changing form, providing a certificate, opening a computer file, processing a

computer file, or executing an application program.

12. (Previously Presented) The method of claim 10, wherein the utilizing step further

comprises:

continuously collecting meta data resulting from use of the computing device during the

current user session at the computing device; and

the method further comprises:

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generating a new segment based on the collected meta data upon completion of the current user session; and

processing the new segment.

13. (Previously Presented) The method of claim 12, wherein the processing step comprises:

updating the meta data collection with the new segment.

14. (Previously Presented) The method of claim 12, wherein the meta data comprises application data for being usable in an application executable on the computing device, and context data for identifying context in which said application data are used, and

wherein the utilizing step further comprises:

determining statistical information associated with the meta data, the statistical information indicating relationships between the meta data, wherein the retrieving step is performed in part based on the statistical information.

15. (Original) The method of claim 14, wherein the context data identify at least one of the following: user roles, uniform resource identifiers (URIs), file names, and/or form names pertaining to the application data.

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16. (Previously Presented) The method of claim 14, wherein the application data

comprise at least one of the following: page display setting data, file display setting data, user

ID/password combinations, field values for computer forms, user's preference data, bookmarks,

and certificates.

17. (Previously Presented) The method of claim 10, wherein the current context is for

filling in a computer form, and the applying step comprises:

automatically filling in the computer form with said most appropriate meta data.

18. (Previously Presented) The method of claim 10, wherein, if the current context is for

filling in a computer form, the utilizing step further comprises:

retrieving, from the meta data collection, alternative meta data that are related to the

current context of filling in the computer form; and

presenting the alternative meta data to the user for the user's consideration.

19. (Previously Presented) The method of claim 10, wherein the current context is for

filling in a password-changing computer form, and the retrieved meta data comprises a user

identification and a password, and

wherein the applying step comprises:

presenting to the user the password in an obfuscated format; determining whether it is

safe to present the actual password to the user; and

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presenting the actual password in a non-obfuscated format when it is determined to be

safe to present the actual password.

20. (Previously Presented) The method of claim 94, wherein the utilizing step comprises:

formulating search requirements based on a current context of using the computing

device; and

executing a search based on the search requirements using heuristics algorithms.

21. (Original) The method of claim 20, wherein the search requirements specify

weighted properties of the current context of using the computing device.

22. (Previously Presented) The method of claim 94, further comprising the step of:

providing a graphical user interface (GUI) for allowing the user to organize the meta data

collection.

23. (Original) The method of claim 22, wherein the GUI displays a graphical tool in a

cylindrical configuration for organizing the meta data collection.

24. (Cancelled)

25. (Previously Presented) The method of claim 88, wherein, in the encrypting step, the

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encryption key is represented as a hash of identifying information associated with the new

segment, concatenated with a pass phrase of the user.

26. (Previously Presented) The method of claim 94, wherein the computing device

implements a Common Data Security Architecture (CDSA), and the utilizing step is performed

by a CDSA add-on module.

27. (Previously Presented) The method of claim 94, wherein the central repository

subsystem is implemented using WebDAV protocols.

28-29. (Cancelled)

30. (Previously Presented) The computer program product of claim 96, further

comprising:

computer executable code configured to incrementally upload any new meta data

generated during the current user session from the computing device to the central repository.

31. (Previously Presented) The computer program product of claim 96, wherein the

computer executable code configured to connect comprises:

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computer executable code configured to receive, by the central repository subsystem,

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authentication information from the user;

computer executable code configured to verify validity of the authentication information;

and

computer executable code configured to notify the computing device that the user has

proper authority to access the central repository if the authentication information is verified as

valid.

32. (Previously Presented) The computer program product of claim 31, wherein the

authentication information comprises user identification, a pass phrase of the user, and an

identifier for the central repository or a component at the central repository subsystem.

33. (Previously Presented) The computer program product of claim 32, wherein the

computer executable code configured to verify comprises:

computer executable code configured to determine a secret key represented as a hash of:

the received user identification, concatenated with a hash of the received identifier,

concatenated with the received pass phrase; and

computer executable code configured to compare the secret key with a stored key

associated with the user.

34. (Previously Presented) The computer program product of claim 96, wherein the computer executable code configured to update comprises:

computer executable code configured to determine if the local repository is at a null state; computer executable code configured to first request the central repository subsystem to transmit any segment associated with the user that has not been applied to the computing device if the local repository is not at a null state; and

computer executable code configured to second request the central repository subsystem to transmit all segments associated with the user if the local repository is at a null state.

35. (Previously Presented) The computer program product of claim 34, wherein the computer executable code configured to update further comprises:

computer executable code configured to receive at least one segment from the central repository subsystem in response to said first requesting instructions;

computer executable code configured to decrypt the at least one segment; and computer executable code configured to apply the decrypted at least one segment to the meta data collection to produce the meta data collection associated with the user.

36. (Previously Presented) The computer program product of claim 34, wherein the computer executable code configured to update further comprises:

computer executable code configured to receive at least one segment from the central repository subsystem in response to said second requesting instructions;

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computer executable code configured to decrypt the at least one segment; and

computer executable code configured to generate the meta data collection for the user

using the decrypted at least one segment.

37. (Previously Presented) The computer program product of claim 96, wherein the

computer executable code configured to retrieve is implemented using heuristics algorithms and

the computer executable code configured to utilize further comprises computer executable code

configured to apply the retrieved meta data in each of the different contexts.

38. (Previously Presented) The computer program product of claim 37, wherein the

current context comprises at least one of the following: opening a web page, filling in a computer

form, filling in a password-changing form, providing a certificate, opening a computer file,

processing a computer file, or executing an application program.

39. (Previously Presented) The computer program product of claim 37, wherein the

computer executable code configured to utilize further comprises:

computer executable code configured to continuously collect meta data resulting from use

of the computing device during the current user session at the computing device; and

the method further comprises:

computer executable code configured to generate a new segment based on the collected

meta data upon completion of the current user session; and

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computer executable code configured to process the new segment.

40. (Previously Presented) The computer program product of claim 39, wherein the

computer executable code configured to process comprises:

computer executable code configured to update the meta data collection with the new

segment.

41. (Previously Presented) The computer program product of claim 39, wherein the meta

data comprises application data for being usable in an application executable on the computing

device, and context data for identifying context in which said application data are used, and

wherein the computer executable code configured to utilize further comprises:

computer executable code configured to determine statistical information associated with

the meta data, the statistical information indicating relationships between the meta data, wherein

the computer executable code configured to retrieve is executed in part based on the statistical

information.

42. (Original) The computer program product of claim 41, wherein the context data

identify at least one of the following: user roles, uniform resource identifiers (URIs), file names,

and/or form names pertaining to the application data.

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43. (Previously Presented) The computer program product of claim 41, wherein the

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application data comprise at least one of the following: page display setting data, file display

setting data, user ID/password combinations, field values for computer forms, user's preference

data, bookmarks, and certificates.

44. (Previously Presented) The computer program product of claim 37, wherein the

current context is for filling in a computer form, and the computer executable code configured to

apply comprises computer executable code configured to automatically fill in the computer form

with said most appropriate meta data.

45. (Previously Presented) The computer program product of claim 37, wherein, if the

current context is for filling in a computer form, the computer executable code configured to

utilize further comprises:

computer executable code configured to retrieve, from the meta data collection,

alternative meta data that are related to the current context of filling in the computer form; and

computer executable code configured to present the alternative meta data to the user for

the user's consideration.

46. (Previously Presented) The computer program product of claim 37, wherein the

current context is for filling in a password-changing computer form, and the retrieved meta data

comprises a user identification and a password, and

wherein the computer executable code configured to apply comprises:

computer executable code configured to present to the user the password in an obfuscated format;

computer executable code configured to determine whether it is safe to present the actual password to the user; and

computer executable code configured to present the actual password in a non-obfuscated format when it is determined to be safe to present the actual password.

47. (Previously Presented) The computer program product of claim 96, wherein the computer executable code configured to utilize comprises:

computer executable code configured to formulate search requirements based on a current context of using the computing device; and

computer executable code configured to execute a search based on the search requirements using heuristics algorithms.

- 48. (Original) The computer program product of claim 47, wherein the search requirements specify weighted properties of the current context of using the computing device.
- 49. (Previously Presented) The computer program product of claim 96, further comprising:

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computer executable code configured to provide a graphical user interface (GUI) for allowing the user to organize the meta data collection.

50. (Original) The computer program product of claim 49, wherein the GUI displays a

graphical tool in a cylindrical configuration for organizing the meta data collection.

51. (Cancelled)

52. (Previously Presented) The computer program product of claim 89, wherein the

encryption key is represented as a hash of identifying information associated with the new

segment, concatenated with a pass phrase of the user.

53. (Previously Presented) The computer program product of claim 96, wherein the

computing device is configured in Common Data Security Architecture (CDSA), and the

computer executable code configured to utilize is executed by an add-on module to the CDSA

configuration.

54. (Previously Presented) The computer program product of claim 96, wherein the

central repository subsystem is implemented using WebDAV protocols.

55. (Cancelled)

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56. (Previously Presented) The system of claim 98, wherein the computing device

uploads any new segment to the central repository at a predetermined time.

57. (Previously Presented) The system of claim 98, wherein the computing device

incrementally uploads to the central repository any new meta data generated during the current

user session.

58. (Cancelled)

59. (Previously Presented) The system of claim 98, wherein the central repository

subsystem further comprises a manager for managing the central repository, and

wherein the central repository subsystem receives from the computing device

authentication information input by the user, verifies validity of the authentication information,

and notifies the computing device that the user has proper authority to access the central

repository if the authentication information is verified as valid.

60. (Previously Presented) The system of claim 59, wherein the authentication

information comprises user identification, a pass phrase of the user, and an identifier for the

central repository or a component at the central repository subsystem.

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61. (Previously Presented) The system of claim 59, wherein the central repository

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subsystem determines a secret key represented as a hash of:

the received user identification, concatenated with a hash of the received identifier,

concatenated with the received pass phrase, and

the central repository subsystem compares the secret key with a stored key associated

with the user to verify the user's authentication information.

62. (Previously Presented) The system of claim 99, wherein the data repository module

determines if the local repository is at a null state, transmits a first request to the central

repository subsystem to transmit any segment associated with the user that has not been applied

to the computing device if the local repository is not at a null state, and transmits a second

request to the central repository subsystem to transmit all segments associated with the user if the

local repository is at a null state.

63. (Original) The system of claim 62, wherein the encryption/decryption module

receives at least one segment from the central repository subsystem in response to said first

request, and decrypts the at least one segment, and wherein the data repository module applies

the decrypted at least one segment to the meta data collection to produce the meta data collection

associated with the user.

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64. (Original) The system of claim 62, wherein the encryption/decryption module

receives at least one segment from the central repository subsystem in response to said second

request, and decrypts the at least one segment, and wherein the data repository module generates

the meta data collection for the user using the decrypted at least one segment.

65. (Previously Presented) The system of claim 99, wherein the data repository module

retrieves the most appropriate meta data using heuristics algorithms and transmits the retrieved

meta data to an appropriate one of the applications which in turn applies the retrieved meta data

in each of the different contexts.

66. (Previously Presented) The system of claim 65, wherein the current context

comprises at least one of the following: opening a web page, filling in a computer form, filling in

a password-changing form, providing a certificate, opening a computer file, processing a

computer file, or executing an application program.

67. (Original) The system of claim 65, wherein the data repository module continuously

collects meta data resulting from use of the computing device during the current user session at

the computing device, and generates a new segment based on the collected meta data upon

completion of the current user session.

68. (Previously Presented) The system of claim 67, wherein the data repository module

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updates the meta data collection with the new segment.

69. (Previously Presented) The system of claim 67, wherein the meta data comprises

application data for being usable in an application executable on the computing device, and

context data for identifying context in which said application data are used, and

wherein the data repository module determines statistical information associated with the

meta data and retrieves said appropriate meta data based on the statistical information, the

statistical information indicating relationships between the meta data.

70. (Original) The system of claim 69, wherein the context data identify at least one of

the following: user roles, uniform resource identifiers (URIs), file names, and/or form names

pertaining to the application data.

71. (Previously Presented) The system of claim 69, wherein the application data

comprises at least one of the following: page display setting data, file display setting data, user

ID/password combinations, field values for computer forms, user's preference data, bookmarks,

and certificates.

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72. (Original) The system of claim 65, wherein the current context is for filling in a

computer form, and said appropriate one of the applications automatically fills the computer

form with said most appropriate meta data.

73. (Original) The system of claim 65, wherein, if the current context is for filling in a

computer form, the data repository module retrieves, from the meta data collection, alternative

meta data that are related to the current context of filling in the computer form, and transmits the

alternative meta data to said appropriate one of the applications which in turn presents the

alternative meta data to the user for the user's consideration.

74. (Previously Presented) The system of claim 65, wherein the current context is for

filling in a password-changing computer form, and the retrieved meta data comprises a user

identification and a password, and wherein the data repository module controls said appropriate

one of the applications to present to the user the password in an obfuscated format, determines

whether it is safe to present the actual password to the user, and controls said appropriate one of

the applications to present the actual password in a non-obfuscated format when it is determined

to be safe to present the actual password.

75. (Previously Presented) The system of claim 99, wherein the data repository module

formulates search requirements based on a current context of using the computing device, and

executes a search based on the search requirements using heuristics algorithms.

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76. (Original) The system of claim 75, wherein the search requirements specify weighted properties of the current context of using the computing device.

77. (Previously Presented) The system of claim 98, further comprising:

a meta data editor for allowing the user to organize the meta data collection.

78. (Original) The system of claim 77, wherein the meta data editor displays a graphical tool in a cylindrical configuration for organizing the meta data collection.

79. (Cancelled)

80. (Previously Presented) The system of claim 90, wherein the encryption key is represented as a hash of identifying information associated with the new segment, concatenated with a pass phrase of the user.

- 81. (Previously Presented) The system of claim 99, wherein the computing device is configured in Common Data Security Architecture (CDSA), and the data repository module is an add-on module to the CDSA configuration.
- 82. (Previously Presented) The system of claim 98, wherein the central repository subsystem is implemented using WebDAV protocols.

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83. (Previously Presented) The system of claim 98, wherein at least one of the central repository and the local repository is implemented using a network-attached storage.

84. (Previously Presented) The system of claim 99, wherein the data repository module resides on a proxy machine accessible through a predetermined connection means.

85-87. (Cancelled)

88. (Previously Presented) The method of claim 95, wherein the uploading step comprises:

temporarily locking the local repository;

encrypting the new segment using an encryption key;

transmitting the encrypted new segment from the computing device to the central repository subsystem for storage in the central repository; and

unlocking the local repository.

89. (Previously Presented) The computer program product of claim 97, wherein the computer executable code configured to upload comprises:

computer executable code configured to temporarily lock the local repository;

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computer executable code configured to encrypt the new segment using an encryption

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key;

computer executable code configured to transmit the encrypted new segment from the

computing device to the central repository subsystem for storage in the central repository; and

computer executable code configured to unlock the local repository.

90. (Previously Presented) The system of claim 99, wherein the data repository module

temporarily locks the local repository and creates the new segment based on collected meta data,

the encryption/decryption module encrypts the new segment using an encryption key, and the

data repository module transmits the encrypted new segment to the central repository subsystem

for storage in the central repository and unlocks the local repository.

91. (Previously Presented) The method of claim 94, wherein the meta data collection

stored in the local repository of the computing device at the user's side includes a plurality of

meta data groups, each of the meta data groups corresponding to one of a plurality of roles of the

user.

92. (Previously Presented) The computer program product of claim 96, wherein the meta

data collection stored in the local repository of the computing device at the user's side includes a

plurality of meta data groups, each of the meta data groups corresponding to one of a plurality of

roles of the user.

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93. (Previously Presented) The system of claim 98, wherein the meta data collection

stored in the local repository of the computing device at the user's side includes a plurality of

meta data groups, each of the meta data groups corresponding to one of a plurality of roles of the

user.

94. (Previously Presented) A method of managing meta data using a central repository at

a central repository subsystem, the central repository being accessible by a computing device

through a communications network, the method comprising the steps of:

connecting to the central repository through the communications network based on a user

input;

updating a local repository of the computing device with at least one segment from the

central repository that is associated with the user to produce a meta data collection associated

with the user; and

utilizing, by the computing device, the meta data collection during a current user session

at the computing device to assist the user in using the computing device,

wherein the utilizing step comprises retrieving, from the meta data collection, meta data

that would be most appropriate for each of different contexts of using the computing device,

based on at least a current role of the user.

95. (Previously Presented) The method of claim 94, further comprising the step of:

uploading any new segment from the computing device to the central repository at a

predetermined time.

96. (Previously Presented) A computer program product embodied on computer readable medium readable by at least one of a computing device and a central repository subsystem, for managing meta data using a central repository at the central repository subsystem, the central repository being accessible by the computing device through a communication network, the computer program product comprising:

computer executable code configured to connect, through the communications network, to the central repository based on a user input;

computer executable code configured to update a local repository of the computing device with at least one segment from the central repository that is associated with the user to produce a meta data collection associated with the user; and

computer executable code configured to utilize, by the computing device, the meta data collection during a current user session at the computing device to assist the user in using the computing device,

wherein the computer executable code configured to utilize comprises computer executable code configured to retrieve, from the meta data collection, meta data that would be most appropriate for each of different contexts of using the computing device, based on at least a current role of the user.

97. (Previously Presented) The computer program product of claim 96, further comprising:

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computer executable code configured to upload any new segment from the computing

device to the central repository at a predetermined time.

98. (Previously Presented) A system for managing meta data in a secure manner, the

system comprising:

a central repository subsystem comprising a central repository for storing a plurality of

segments associated with a user in a collection order; and

at least one computing device capable of communicating with the central repository

subsystem through a communications network, the computing device comprising a local

repository and being capable of connecting, through the communications network, to the central

repository based on a user input, updating the local repository with at least one of the segments

from the central repository to produce a meta data collection associated with the user, and

utilizing the meta data collection during a current user session at the computing device to assist

the user in using the computing device.

wherein the computing device retrieves, from the meta data collection, meta data that

would be most appropriate for each of different contexts of using the computing device, based on

at least a current role of the user.

99. (Previously Presented) The system of claim 98, wherein the computing device further

comprises:

a plurality of applications selectably executable on the computing device;

a security-service providing architecture structure for selectively providing security-based services to at least one of the plurality of applications;

a data repository module, provided as an add-in module to the security-service providing architecture, for utilizing the meta data collection to assist the user in using the computing device; and

an encryption/decryption module for encryption any new segment to be transmitted to the central repository subsystem.

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## IX. EVIDENCE APPENDIX

None

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## X. RELATED PROCEEDINGS APPENDIX

None